1: Glacken E-5 (1951-1952) 1953 AC7 Okinawa AC7

Nevertheless, to superficial observation at least, villagers seem to enjoy good health. Most of them are energetic. Obesity is very unusual. The average man or woman of any age has little spare flesh. The most frequent complaints are of dysentery, constipation, colds, boils and swellings, and intestinal parasites. There are signs of malnutrition in the distended bellies of some small children, probably due to the unrelieved and starchy diet of the sweet potato,[6] with extremely few animal fats and proteins.

The sores and scabs on the heads, faces, arms, and legs of infants and young children are still the curse of childhood, conditions made worse by the flies which swarm around them. (In summer, I have seen as many as 20 flies on the face of a sleeping child without a trace of any muscular reaction). There are few Okinawans today who do not bear the scars of these sores of infancy, especially on the scalp. (Young men are sensitive about this and it is one reason also for keeping the hair long). Younger parents now are beginning to use various disinfecting powders and talcs to prevent these sores (which look like impetigo) and seem to have abandoned the attitude of a previous generation that these were childhood experiences to be endured. Much could be done to eliminate these diseases of childhood by a campaign in which local groups like the Women's Association and the public health authorities joined.

In the summer months, Jap B encephalitis (known as nUen) is very much dreaded. Some villagers had only a vague idea that it was a brain fever and a few knew that the mosquito was the vector.

According to residents of each of the villages, no cases of leprosy had been discovered in recent years. This disease is also dreaded and I doubt that an attempt would be made to conceal a case.

Young people have uncommonly beautiful, evenly spaced, white teeth. This seems to have been an Okinawan characteristic for a long time, as Basil Hall commented upon it 135 years ago. Around the late teens or early twenties, the teeth decay, and there are many extractions and replacements with gold or steel false teeth. Some extractions are intentional, especially among young girls who believe that a gold tooth sets them apart and adds to beauty. But I am convinced that this is of minor importance as an explanation. Okinawans

6 I am not acquainted with any analyses of the composition of the Okinawan sweet potato. In laboratory tests of an improved high-starch American variety, the composition when ground for starch was: moisture, 64.5%; starch, 25.5%; sugars, 2.8%; crude protein, 1.5%; pectic substances, 2.2%; crude fat, 0.6%; mineral matter, 0.9%; other, 2%. Sweet potato carotene can be readily converted to Vitamin A. See Dawson, P. R., Greathouse, L. H., and Gordon, W. O. Sweet potatoes: more than starch. In: Crops in peace and war. (U. S. Dept. of Agric., The yearbook of agriculture 1950-51) Washington, 195-203. Ref. on 195, 201.

164 Okinawans
[753] blame tooth decay on the brown sugar. It may be diet or water.
[515] Use of tooth brushes varies considerably with individuals and families.

515 The standard of cleanliness in Okinawan homes is not high,
511 but this cannot be ascribed to indifference. One should constantly bear in mind that it is easy to keep clean with plenty of soap, showers, hot running water, washing machines, and flush toilets.

9

Native Medicine

278 The native medicine has already been referred to in the discussion of fish and wild plants used as medicines. Their use has declined with growing reliance on manufactured drugs and pharmaceuticals.

[757] The golden needle (kinbari) is still used by rural doctors (yabu)
[759] in the treatment of inflamations of the joints and rheumatism. There was one such doctor in Minatogawa, but ordinarily he is called only when real medical attention is not available.

[913] The needle is scarcely thicker than a horse hair. It is encased in a shaft about 2 3/8 inches long. The grip or base of the needle is 3/4 of an inch long and the needle itself 1 7/8 inches. The needle is tapped and gradually worked into the affected part, and a length from 3/4 to one inch is broken off and allowed to remain in the body and circulate to effect its curative powers.

Blood letting is still practiced, often by the individual himself. Thin cuts are made with a razor, generally on the forehead above the eyebrows and slanting toward the bridge of the nose. This is done to relieve headaches and general pains and may be resorted to after aspirin has failed to relieve a headache. On a close look, one can often observe the slight, thin, long scars, which look like tiny wrinkles, resulting from these slashes. During the operation, a sake cup is held up to the place being cut. The cup may even have a little sake in it. When done by a native doctor, the blood may be sucked through a small tube and allowed to drip into a sake cup.

Cauterization using moguса (moxa) also is still common. One can frequently see scar tissue, the results of burning moguса on the flesh, usually in the area around the wrist. Moguса is applied with glowing charcoal sticks, burning thread, or tobacco. It is used for no specific complaint, but as a counter-irritant cureall for a wide variety of ailments.

[386] Acupuncture apparently is little used now. Formerly an area was pricked with a needle, or a series of needles brought to a point, and an indigo dye applied. One can observe these round spots, circles of dots, occasionally on the shoulders and the backs of older people. These should not be confused with tattooing.

2:Maretzki & Maretzki E-5 (1954-1955) 1963 AC7 Okinawa AC7
Taira

diseases seemed to be below the expected rate for Okinawa, in general, and we had the impression that Taira people are healthy on the whole. Only one case of leprosy, which had been removed to a special hospital on the island of Yagaji, was reported from Taira.

Among the children there were frequent complaints of intestinal diseases. Most children seem to lodge a variety of parasites, mostly hookworms and tapeworms, and many were subject to skin ailments. One girl had a severe case of what was thought by the nurse to be congenital syphilis. The skin of her whole body was covered with sores which were a constant source of irritation. This 4-year-old never appeared in the company of children other than her younger sister. She would stand in front of her house, her face swollen, her head stooped from discomfort and embarrassment. Almost all children have impetigo and various kinds of rashes. During the summer these cover their faces and parts of the body. Almost all have marks of boils which have plagued them in the course of years.

Because sickness is always a threat, it creates fear, and any explanation which may restore some hope is important knowledge. Although some Western or modern theories about disease have been introduced recently through the school and the village nurse, they filter into every house only slowly and do not materially affect what has been handed down as popular knowledge from older members of each household. Most Taira people are probably quite eclectic in their beliefs as well as in their choice of treatments, so that it would be difficult to ascribe to them any single body of theory of disease.

Home remedies, often applied by old women, are widespread. The most popular ones are blood letting and the use of *moxa* cautery. Whenever people agree that there is "bad" blood in an adult's or child's system, it must be removed. There are many phenomena which are accounted for by the presence of "bad" blood. Visible signs such as eczema of the skin or swellings are such indications, but malfunctioning of certain organs, the stomach, liver, kidneys, can also call for the removal of "bad" blood. Mothers expose infants as young as five days to the treatment, which may be preventive as well as curative. Pointing to a bluish green area on the infant's back (not the mongoloid spot), whether real or imagined, the mother swabs the area with sake before she or the grandmother make numerous ¼-inch incisions with a razor. After the blood starts to ooze out of the tiny wounds, more sake is rubbed into the skin. The mixture of blood and sake is caught and rubbed on again and again until all the undesirable blood has been drained.

So many Taira babies have eczema that this treatment takes place

2:Maretzki & Maretzki E-5 (1954-1955) 1963 AC7 Okinawa AC7
Taira

757 [854] [164] [232] [578] frequently and may be repeated as many as four times during the first year of a child's life. An older child occasionally undergoes this treatment for a case of violent impetigo. Even a horse may be bled in this way for loss of appetite or other symptoms of disease.

A woman whose face had been struck in an unusual display of temper underwent a blood letting soon after a swelling appeared. Her neighbor from across the street, a farmer like everyone else, sterilized her cheek with iodine and then cut it with a razor until the blood flowed freely. After a night's rest, the woman appeared outside her house without any signs of swelling and seemingly recovered.

● 753 776 769 775 [764] As was pointed out previously, many diseases are believed to be caused by supernatural forces: the ancestor spirits, spirits of those who have just died, and natural deities and evil spirits who wander around at night. The ancestors expect proper respect and attention and in general are benevolent unless neglected. Spirits of those who have recently died are most dangerous if the deceased is from another village. For deceased villagers one is careful to purify oneself after the funeral. The doors of each house are shut at night to protect against the evil spirits of the night air. Disease is less frequently caused by natural deities who have been neglected or mistreated.

755 756 [787] In case of sickness or other unfortunate events in the family, somebody may go to consult the *yuta,* a shaman who communicates with the supernatural. She discovers the cause of misfortune with the help of rice oracles and through powers of divination received through visions and hallucinations. There is no *yuta* living in Taira now, so that people have to travel to the other side of the island, an hour or more on foot, if they want to learn about the source of some evil. Taira [769] people make many such trips to consult this shamanistic specialist. The most common cause of misfortune discovered by the *yuta* is neglect of ceremonies to the ancestral gods or, less frequently, the neglect of cere- [793] monies to the natural deities. Although the *yuta* stands in no direct connection with the high priestess, she may suggest that her client ask the priestess for special prayers to rectify the negligence. In such cases, then, the competence of individuals in the family may not be adequate to deal with the ancestral world, and the priestess enters into family religion.

597 755 769 [796] Some Taira parents still find an adoptive parent for a sickly child in the belief that his own ancestors have caused bad health, and that this can only be remedied by making a formal arrangement which transfers ancestral responsibility for the child to another family. The child remains with his own parents and only visits his foster parents during the New Year and the midsummer Buddhist *Bon* Festival, which honors ancestors, and perhaps at one or two other occasions during the year.

751
514 The drum is nearly full and its surface is in constant motion, a seething
343 mass of maggots. One of those men with the carts that cause you to cross
[364] to the other side of the road will come in a few days to dump it, he hopes.
574 He crosses the yard and is invited into the house. He takes off his shoes
751 and steps up onto the floor. It is surprisingly clean, he finds. A mat is
[356] spread and he sits cross-legged upon it. Tea is offered and he accepts, thinking that it must have been made from boiled water. He learns later that he was wrong. He is given a fan and perceives that its function is keeping the flies away as much as it is creating a breeze. In a spirit of friendly cooperation he and Grandfather take turns shooing the flies off the broken chunks of black sugar that have been placed before them. A larger blue-bottle fly enters and someone makes a special effort to chase
[825] it out. Should the visitor be so crude and impolite as to mention flies and in connection with the toilet, it will be pointed out that only the blue-bottle flies are hatched from the maggots in the toilet. The smaller black house-flies simply produce more flies and hence are harmless.

[264] Bananas are served and the peels follow those of the potatoes out onto the ground. Smaller children run in and out. One child comes in with
[515] its nose running. After a time Mother pulls up its shirt tail and wipes the
[757] mucus off the upper lip. The child has not been well; Mother or Grandmother may take it to the yabuu, who will burn moxa on its skin at the proper places. A neighbor's child walks by; its face and nearly hairless head are
[753] a mass of scabs and its eyes are almost shut by pus. Someone laughingly explains that this is what happens when you don't cut a baby's buttocks properly with a razor to draw out the bad blood.

The visitor is urged to take more tea and sugar. He is complimented on his interest in Okinawa and is asked innumerable questions about America. The family is eager for knowledge and for further contact. As he rises to leave, he is urged to return. He puts on his shoes, finding one slightly
[753] damp from the poor aim of the youngest child. He is cautioned to wear his hat and knows by now the unspoken fear---encephalitis---caused by too much
[296] exposure to the sun. He notices that around the well where Mother has been doing laundry a great pool of water is gradually sinking into the sand. As he picks his way across the yard he wonders if the family would not be better off living in a houseboat, preferably in a fast-moving stream.

751 Such are some of the features of Okinawan life. Yet it would be a mistake to assume that there are no standards of sanitation. There are; they
356 are simply narrower than those of most Americans. Many Okinawans do throw
751 garbage out their front doors as indicated above, but it is also true that the floor of the house is usually cleaner than many American floors. It has to be clean; people sit on it and sleep on it. People take off their shoes before stepping up onto it or if they have been to the fields barefooted
751 they may wash their feet before stepping up onto it. But the area of clean-
[351] liness ends with the step. Beyond the step is a different sort of territory.
[514] Yet even in the yard there is a limit to the amount of trash that may be allowed to accumulate before it is swept away. The practice of urinating in the yard is distasteful to the American observer, but there is perhaps less basis for objection to it as a health hazard. Urine is relatively harmless. Feces, however, go into the toilet. If an untrained child defecates in the yard usually someone cleans up the spot.

Three sets of factors seem to contribute to the low standards of sanitation that exist in both rural and urban Okinawa. These factors lie in the realm of knowledge, of society, and of economics. Many Okinawans very clearly lack scientific knowledge of the causes of diseases and their relation to sanitation. But it would be incorrect to say that they are simply ignorant or that they need only education. They do not regard themselves as ignorant but feel rather that they already know the true causes of diseases and their proper treatment. What they need is not merely education but re-education. Before educators can teach scientifically accurate information they must first determine what the folk beliefs are and then replace them with scientific explanations. It is not sufficient merely to add some scientific information to folk beliefs. Many Okinawans, perhaps most, have heard of 'baikin', "bacteria", and their relationship to certain diseases. But probably few see them as sufficient causes of diseases or see them as organisms subject to biological laws of life, growth, and death. Bacteria have no doubt become for many Okinawans merely contributing factors, ranged alongside ghosts, unsupported ancestors, and bad blood, in the mixture of the natural and the supernatural that constitutes Okinawan medical knowledge. 751 753

The belief that only blue-bottle flies hatch from the maggots in the toilet may not be universal on Okinawa but is certainly found among some people; one person who subscribed to the belief was a university student. This belief leads people to take pains to keep blue-bottle flies out of the house "because they contain bacteria", but to tolerate the smaller black house flies. If people believe that house flies merely give birth to more house flies, they can regard house flies as just a nuisance but not a danger. Posters encouraging people to get rid of flies because they carry disease may thus be interpreted as applying only to the blue-bottle fly. The house fly continues to infest many homes in incredibly great numbers. 751 825 753

Several persons who discussed encephalitis revealed that though they had heard of mosquitoes having something to do with it, they believed that it was mainly caused by over-exposure to the rays of the sun. The university student mentioned above was one of these persons. It is worth noting also that an announcement issued 9 May 1954 warns people that the encephalitis season is approaching and therefore everyone should beware of mosquitoes and exposure to the sun.[1]

Other beliefs regarding the cause of disease will be discussed in the next section of this chapter. Many of these beliefs rule out natural causes altogether and thus rule out sanitation as non-essential. Ignorance is therefore not a negative factor but a positive factor against better sanitation. 751 753

[1] I have no information at this writing as to whether exposure to the sun has the effect of making one more susceptible to Japanese Type B encephalitis. But even if this were the case, as it may possibly be, the point is that some, perhaps a majority, of the Okinawans believe that the sun is the sole cause of the disease, and therefore do not see encephalitis as another reason for mosquito control.

Moreover, during the last days of the battle and for a period of nearly a year afterwards the Yamada people, like most other villagers in the vicinity, lived a concentration-camp sort of existence in the very crowded and unsanitary city of Ishikawa. Then when they returned to their village they had to rebuild their houses from materials given by the Americans and from salvage. This experience undoubtedly had a bad effect on morale and perhaps also on standards of cleanliness. Yet Yamada appears to be a cleaner village than many seen in Southern Okinawa. This may be because of its less dense concentration of houses and its fairly good water system.

Economic factors can be summed up in the single word "poverty". The most modern knowledge and the best intentions are not sufficient if one has to carry water from a distance, has no money for soap, and has little strength left after the daily grind of making a living.

3. The Supernatural and Disease

The Okinawans, like all peoples, have a large body of traditional knowledge about the ills of the body and what to do about them. As among many peoples with little contact with Western science, a great many illnesses are attributed to causes that we would call supernatural. Thus before one can understand the Okinawan view of diseases one must understand some of the Okinawan concepts of the supernatural.

Concepts of the Supernatural The living human being, according to Okinawan belief, contains two entities, the mabui (or mabuyaa, possibly related to Japanese 'mamori', "guardian") and the shii (pos. ident. with Japanese 'sei', "essence"). These correspond to the Western concept "soul". According to some informants the two are the same, but then further conversation reveals a difference in usage that must reflect a difference in concept. It appears that the mabui is a discrete entity capable of being dislodged from the body without death resulting immediately. The shii on the other hand appears to have more the nature of a force that can be augmented or diminished.

What happens after a person dies is not altogether clear (see also Chapter V). According to some he becomes a "Buddha" (Japanese 'hotoke'), according to others he becomes a "god" (Japanese 'kami-sama') and ascends to Heaven. This happens if all goes well, if the person dies in a normal manner and has left no important task undone, and if his family makes the proper offerings. However, if such is not the case, he may become a ghost and haunt this world. Several terms are used for dead persons in this latter form---yanamung ("bad thing"), yanakaji ("bad wind"), majimung (?), shinichu ("dead person"), shinigami ("dead god"), shinimabui ("dead mabui"). The last term, shinimabui, contrasts with ichimabui,("live mabui"), used for the displaced mabui of a living person. All of these terms seem to mean the same thing, the dead who are not cared for and who are therefore a potential danger.

The dead who are cared for are said to ascend to Heaven (in Japanese, 'Ten ni agaru'), but they may also be present in the tomb and at

798 'kami' is like the Oceanian "mana", a supernatural power that enters natural
171 objects or persons.[1] Whatever may be the case in Japan, the Okinawan kami refers to definite beings, discrete entities, and not to a force. However, the concepts shiji and perhaps shii may be mana-like.

753 Causes of Disease Okinawans frequently use these concepts of the supernatural in their interpretation of the causes and proper treatment of illnesses of the body. Illness may be caused, they believe, by loss of the shii or the mabui, by the harmful inclinations of other living persons and of dead persons, and by offences to ancestors and other spirits that are ordinarily helpful.

753
774 Gradual withdrawal of the shii may cause illness or death. A preg-
[778] nant woman is warned not to attend a funeral or a bone-washing because the shii of the unborn child may be drawn into the tomb. A sudden jolt or a scare may cause the mabui to be dislodged and this will result in a feeling of weakness and, if the mabui is not replaced, perhaps ultimately death. Treatment of loss of mabui is often practiced by old women. One woman who had treated her grandchildren on numerous occasions said that she laid on a table offerings including salt, rice, water, and a dish containing seven stones; then she took a garment of the sick child, prayed at the entrance to the house, and called the child's name. The mabui of the child then entered the garment and when she put the garment on the child the mabui re-
[776] entered the child. Formerly she would have prayed at the pigsty-privy, but it no longer exists. One of her sons gave the interpretation that the pigsty-privy god being the lowest god knew the whereabouts of the lost mabui and he informed the ancestral spirits who were able to bring it back to the garment.

[775] The most serious cases of loss of mabui are caused by the actual theft of the mabui by dead persons, who are said to take the mabui to the tomb. As I have already mentioned, this may happen when a baby sneezes.
[756] Treatment of this type of soul-loss probably requires the services of a yuta, a sort of shaman. The yuta is said to be able to see the living person's mabui before the tomb, in the form of the person. If the form is facing this world and looks sad there is a chance of recovery, but if it is facing the tomb and looks happy, the patient will probably die. But in spite of the occasional serious nature of loss of mabui, I have observed young boys when startled jokingly cry out "mabuyaa, mabuyaa!" as if to call back their displaced mabui. And it is said that some persons jokingly pretend to scoop it up and pour it back into the body through the head. However, the joke may serve to relieve actual tensions that exist after a sudden shock.

754 Little information was obtained on the harm that can be done by a living person with ichijama. According to Yanagida[2] the ichijama is the soul of a woman who can send it to possess a person or object in order to

1 Haring, 1946, p. 221 and elsewhere.

2 Yanagida, 1951, p. 30.

cause misfortune; the ability to do this, he says, is hereditary from mother to daughter. My informants did not identify ichijama with the mabui or any other such entity, but merely explained it as a kind of 'noroi', "curse". Its effect is a sharp pain inside the body or the feeling that a fingernail has been thrust into the eye. If the person responsible is known, they said, the affliction may be cured by spitting in his direction and throwing pig dung in his direction, shouting, "I smear it on your face!" According to Yanagida, a yuta can cure an afflicted person by squeezing his thumb, which causes the thumb of the person responsible to be crushed. 754 [756]

Illness may also be caused by gods or local spirits as punishment for the breaking of tabus. For example, at Yamazato in Chinen-son it was said that on the 1st, 8th, 18th, and 28th of every month the "mountain god" (yama nu kami) makes a circuit of inspection of the mountain behind the village and therefore one cannot go to cut trees or grass on those days for fear of punishment. 753 784

But probably the most frequent interpretation of illness and misfortune is that it is caused by ugwambusuku, an insufficiency of worship (from ugwang, "worship" and fusuku, "insufficiency"). As has been explained, the dead can influence the lives of the living for good or bad. If the ancestors of a family are well cared for, that is, receive the proper offerings and worship, they may help that family to prosper and multiply, but on the other hand, if the ancestors are not cared for they will let the family know of their needs by some light illness, or, if their needs are still ignored, by some greater misfortune. They may not deliberately mean to harm their descendants; the misfortune may be automatic; this point is not clear. At any rate, the fear of ugwambusuku appears to be a very common anxiety and to play a central role in the whole structure of ancestor worship. Various religious practitioners and diviners, but particularly the yuta, are frequently called upon to try to determine where the insufficiency lies, what deceased person has not received his full share of worship and is therefore causing the current illness or other misfortune. To account for such illnesses and misfortunes the yuta and others may have revelations (shirashi) which revise the family's genealogy and even reveal the existence of hitherto unknown ancestors. 753 769 775 [152] [756] [787]

The insufficiency is not always of worship of the ancestors, although this is probably the most frequent type. Illness may also be caused by an insufficiency of worship of the Fire God. It is said that if an illegitimate child or the child of a secondary wife does not worship at least once at the Fire God of his shiji ("line") that is, the Fire God of his father's family, he may become ill. Thus it is not uncommon for the mother of an illegitimate child to bring it to the house of its father and ask to let it pray once to the Fire God there. This practice may also, of course, serve to demonstrate paternity. 753 782 [848] [851]

Also probably related to the concept that the ancestors influence the living is the practice of establishing a fictitious adoptive relationship between a child and an unrelated family. If a child is weakly its mother may ask an unrelated adult to become the yashinee-uya, "adopted parent", 769 753

769 of the child; the child prays several times a year, on the important occa-
753 sions, at the ancestral tablets of the adopted parent, but otherwise lives as before. The rationale of this practice may be: if one set of ancestors is not sufficient for the child, why not give him another?

753 Also related to the concept ugwambusuku is the notion that certain
828 persons are destined to do more than just make offerings; some are to become
794 kaminchu, "god persons", and play the principal roles at the family worship at the important holidays. If these persons shirk this duty they may become ill as a consequence. In certain persons, particularly older women, persistent illness and especially mental illness may be interpreted as a sure sign that the afflicted person ought to become a kaminchu. There is one well-recognized type of mental illness called 'kami-buri'; the person with this disorder constantly makes the gestures of prayer toward various persons and objects in an extravagant manner. Such a person is almost sure to become a religious practitioner after recovery. In fact some kaminchu positions must
[756] be filled by persons who have had 'kami-buri'. The yuta may also receive his, or more often her, vocation through such an illness. (Recently a visiting psychiatrist commented on the low number of cases at the Kin mental hospital. There are of course many cases that are not committed to the institution because Okinawan society has a place for them; they become its psychiatrists.)

Other concepts of disease will be discussed in the next section.

4. Medical Practice

755 Home Remedies There are a number of home remedies that are known to many
757 persons, especially older women. These include the use of certain herbs, the letting of blood, the use of salt, prayer, swearing for exorcism, spells. These methods of treatment may be used by any old woman to the extent of her knowledge, but if the illness appears to be too serious for these treatments a professional medical practitioner may be consulted. However, the distinction between the professional person and the skilled amateur is not always clear.

757 Herbs are used for digestive disorders and particularly for female
824 disorders. Tawada in his description of Okinawan flora[1] lists ten plants used for medicinal purposes, nine of which are said to be useful to female disorders along with a variety of other things ranging from toothaches to appendicitis.

757 Blood-letting is practiced on most infants as a cure for skin eruptions and is sometimes also used on adults. Shallow incisions are made with a razor to let out the "bad blood". These are made on a baby's buttocks and sometimes, though less frequently at the present time than in the past, on the face of an adult.

755 Salt is used for purification. A yuta whom I saw exorcise a house and yard took salt into his mouth and then spit it and threw it in the

1 Tawada, 1951.

direction of some tombs in order to prevent the ghosts from coming into the yard. I have also seen a woman who had some training as a nurse throw salt over a hospital patient who had just had a major operation; this was, she said, to cleanse the patient and the bed. Salt is also used as a home remedy for stomach disorders. A mother or grandmother may rub salt on the navel of a child suffering from a stomach ache. According to a small boy who received this treatment, it works.

Prayers are directed toward the supernatural beings who may help one overcome an illness. Curses and spells are directed toward malevolent beings, usually ghosts, when they are the cause of illness. Spells (mannaa, Japanese 'majinai') are verbal formulae that have a magical effect. Persons who are known to know spells and who may be asked to use them for the benefit of others are called mannaasaa ('majinai suru hito'), but spells seem to be useful only for a few diseases and so there is probably little specialization in their use.

To indicate something of the mixture of the natural and the supernatural (to use Western categories) in the treatment of illness in the Okinawan home, I have appended a description of the notions about and treatment of a few diseases as observed and as described by informants. These are all skin ailments.

1. Kamigasaa A kasa (skin eruption or rash) caused by kami (gods).

a. Irigasaa Identified as the same as the Japanese 'hashika' (dictionary translation, "measles"). This disease is caught only once, usually as a child. One must catch it before he becomes a complete person ('ichininmae'). Because children sometimes die of it, parents worry before they have caught it but are eager to have it over with. There are lighter and heavier "requests" ('o-negai') so that if a child has a "light request" the parents of other children may bring them in to lie beside the sick child and eat what food he leaves in order that they may contact the disease. But the disease is given by the god and therefore the other children get it only if they were meant to do so.

The disease begins with a fever and then a rash appears on the head and moves downward. If the rash does not appear the fever may rise and therefore parents worry if the rash is delayed. If there is no rash visible it may be that the rash is on the inside unable to get out and thus is causing the fever. This is dangerous.

Careful treatment is essential. The god comes around to see how the patient is being treated; if the family is not watching the child carefully, the god makes the disease worse. In a case observed, the mother kept the child in bed covered with a thick quilt and mosquito net and sat beside him, fanning him almost continuously. Polite language is also necessary in order not to offend the god.

755 757 753 On the 3rd, 5th, and 7th days after the appearance of the rash, mijinaarii ("water-stroking") is performed. It must be performed at the time of day when the tide is beginning to ebb. In the case observed it was performed by the child's maternal grandmother. The old woman first placed a cup of water before the incense-burner representing the Fire God, lit two sticks of incense and placed them in the burner, and prayed. Then she took the water and applied it to the child's forehead and cheeks, stroking lightly downward. The prayer, explained later, went, "A Dog boy (i.e. a boy born in the Year of the Dog) has a request of irigasa-ganashii (term of respect); today I perform the third day water-stroking and so I beg that you make him well."

During the period when the rash is present and perhaps for a few days after, the child ought not to be bathed or even have his face washed; water, except for that used in the "water-stroking", is harmful to the patient. During the course of the disease and for about a month after, the child must not be permitted to eat heavy or fatty foods; these would cause a congestion in the child's throat which might become dangerous.

(In the case observed I asked if it were not true that light might hurt the sick child's eyes; it was agreed that this was said to be true, but it seemed to be distinctly a secondary consideration. The question, in fact, led to a discussion of the decline in the practice of keeping doors tightly closed in order to keep out ghosts.)

b. Mijigasaa, "water rash", a second type of kamigasaa. It is also caused by a god, but it is not as serious. It may be caught two or three times. The eruptions contain a fluid, hence the name. The rash spreads if the fluid touches other parts of the body, so the eruptions are covered with sweet-potato starch when they begin to run. Treatment also includes "water-stroking" and certain food restrictions while the rash is present.

2. Kaji-coraa-kasa A rash accompanied by itching but no running. It may be caught by either a child or an adult. It is caused by yanakaji ("bad winds", i.e. ghosts). It may be contracted either while out walking in the hills or while at home. This disease must be treatly unkindly; the patient should be sworn at and slapped. The itching may be stopped by the use of a pair of 'zōri' (a Japanese style sandal). The person who knows how to perform the treatment first heats the 'zōri' over a fire and then while uttering a spell (mannaa, Japanese 'majinai') he rubs their undersides over the face and body of the afflicted person. He then takes the 'zōri' to a crossroads and puts them in the middle where someone will step on them. This will stop the itching.

An incident was related where this disease was confused with the first one described. At the end of the war, in Ishikawa, an old man of 75 became ill and broke out in large pox. His family believed his disease was caused by yanakaji so they gathered around him and shouted curses ("Eat feces", etc.) at him to chase the yanakaji away. But the old man merely got worse. Then they consulted a yuta and were told that the illness was

not caused by ghosts but by a god and therefore they should speak politely. They did so and the old man recovered. 755 757 753

3. Tangasa A rash with running eruptions, which may be contracted by both children and adults. It begins at the nape of the neck or at the base of the spine. If it spreads all the way around the neck or trunk the patient is in danger of losing his life. One ought not to say the name of this disease and so instead of saying tangasa, people say naa-irannuu-gasa, "the rash that is not called by name".

A person with this disease may be treated by a mannaasaa (spell-worker, in Japanese, 'majinau hito'). The patient is taken to the mannaasaa early in the morning. The mannaasaa, before drinking morning tea even, takes a full puff of tobacco, blows it on the affected spot, and recites a spell. He must say the words without taking a breath and without making a mistake for them to be effective. The words are addressed to the disease, which is probably caused by ghosts.

4. Heegasaa From hee, "skin"; a condition in which the face and scalp become a mass of scabs and the eyes matter. The condition occurs in both children and adults, but seems more common among smaller children. It is treated in small children by blood-letting (hanchuung, in Japanese 'sakuru'). Most infants are said to be bled for breaking out on the buttocks. The buttocks are cut with a razor blade just enough to draw blood. If heegasaa develops it is because the bad blood has not all been drawn out, and so the treatment may be repeated. If the bad blood is not drawn out in childhood the condition may become much worse in adult life. (The mild condition for which infants are bled looks to me like what would be called "diaper rash" in America. The heegasaa is a truly hideous condition which afflicts a number of small children and a few older persons. One of the USCAR medical officers referred to it as "scruff" and expressed the belief that it could be checked in its early stages with a frequent application of warm water and soap. Once it gets started, however, exposure to dirt and flies must make improvement difficult. One case encountered by Lebra had continued for several years. An informant mentioned cases from before the war that had lasted from childhood into adult life; two brothers had heegasaa so that they could not go to school, could not marry, and did nothing but stay at home and scratch themselves. It was said that even more than they feared policemen, they feared flies. This informant believed their condition was caused by their not having been properly bled when children; another informant suggested congenital syphilis.)

5. Hajimakaa A kind of rash that may be caught by a person who happens to pass by a tree called makaa. This tree causes the illness, but not to persons who have the Okinawan name (warabinaa) of Makaa. Therefore a person not so named who sees that he is passing a makaa tree will say, "I am named Makaa too, so if you give it to me I'll break your neck." If this fails and he contracts the illness, he may go back and tie rocks to the limbs of the tree so that they bend down, and repeat his threat.

759 759 [278] The yabuu also prescribe herbal remedies. They do not, however, prepare their medicines, but rather instruct the patient how to gather and prepare the plants for use. The act of preparing one's own medicine may thus have a magical value. Yabuu also prescribe the eating of certain parts of certain animals for their good influence on the corresponding parts of the human body. Dogs and cats are among the animals so used. (This practice may be the source of the belief widespread among Americans on Okinawa that the Okinawans eat dogs; they do, on rare occasions, but not as food, merely as medicine.)

759 Short-cut Systems Standing somewhere between the yabuu and the modern doctor are several types of practitioners who give treatments with heat, light, steam, etc. as all-purpose cures. One man was observed to use a tube in which he burned a substance, probably moxa, while he moved it over the patient's body. His system seemed to be the moxibustion of the yabuu dressed up with "scientific" gadgets. He was described by a friend as "half-doctor half-yabuu", a description that was meant to elicit a favorable response since it implies that he possesses the efficacy of both.

759 278 [164] In addition to these full-time professionals on the fringes of medicine, there are also a number of part-time penicillin-shooters, who are particularly active in areas frequented by American personnel, where they are in demand for the treatment of venereal disease. Penicillin is sold freely and in quantity, perhaps because of the prevalence of venereal disease, and has become a very popular treatment even for very minor infections. Hormone shots also seem to be widely used by untrained persons.

759 [177] Modern Medicine There are of course modern Japanese-trained doctors on Okinawa. But they are relatively few in number, about one for every 3,900 persons.[1] Trained nurses and medical facilities are also too few and too little. But even if there were more doctors and more facilities, it is doubtful that the ordinary Okinawan would make more use of them.

759 753 829 [554] Medical doctors have a high status in Okinawan society. They are admired and respected. Parents frequently express the wish that a son might grow up to become a doctor. But the advice of the doctor is not always heeded. The respect may be more for his education and the social position it gives him than for his professional opinion. In the matter of illness the advice that the ordinary Okinawan respects is more likely to be that of the older members of his own family and of the familiar yuta, sanjinsoo, and yabuu, for this advice is given in terms of insufficiency of worship, soul-loss, and the influence of the twelve-year-cycle. These are concepts that are familiar to him and have an integration with other beliefs, which the concepts dealt with by the doctor do not have. The doctor's [illegible] disregard of the supernatural runs counter to the feelings of the

[1] CAARI, Vol. 1, no. 2, p. 52 gives 126 practicing physicians for Okinawa plus 50 working for GRI. Japan has about one for every 1300 persons; Japan Statistical Yearbook, 1950, gives 63,273 (p. 432) and the total population as 80,216,896 (p. 12).

ordinary Okinawan. Besides, the doctor's interpretation of illness and its cause is more likely to put the responsibility for it on the shoulders of the individual, whereas the traditional interpretation makes the individual less responsible. This, I suspect, is likely to make the doctor's interpretation less popular. Also the treatment received from the native practitioners is familiar and predictable, while the doctor's methods vary more greatly with the nature of the illness, as do his fees.

Another factor contributing to the tendency not to go to the medical doctor may be the very respect in which he is held socially. I have already suggested that in the fields of religion and politics Okinawans try to solve problems at the local level without appealing to higher authorities. This may also be true in dealing with illness. The relations between patient and doctor are certainly of a more formal sort than those between patient and yuta or yabuu. And around the relationship between patient and doctor there have grown up customs that may make the patient hesitate before entering a doctor's care. For example, a patient who is discharged from a hospital after a successful surgical operation (this may not be true of the largest and most modern hospitals) is expected to show his gratitude by giving a 'Tai-in no O-iwai' ("Leaving the Hospital Celebration") on the day of his departure. For this he hires a yuta or some appropriate person to pray for him, he gives gifts to the doctor and the nurses who attended him, and distributes holiday cakes to the other patients. If this is done in style it may cost the patient nearly as much as the operation itself.

5. Prospect of Change

Earlier in this chapter I suggested that Okinawan standards of sanitation might be raised by appealing to individual family pride in appearances. The sphere of sanitation might be pushed out of the house and across the yard by increasing the family's feeling of identification with it. An esthetic appeal might also be made. Okinawans are certainly not insensitive to beauty, and many do have little patches of flowers beside these houses. Standards could also be raised by encouraging more community endeavors. There seem to be a much greater need for this in the city than in the country, where long-established patterns of cooperation in agricultural practices, house-building, etc., exist. It is my impression that in the cities the 'han' or some even smaller unit could be used more effectively in keeping yards and streets clean and drained. It must be remembered that what is needed is constant cleanliness, not merely the sort of holiday cleanliness that comes with periodic inspection. It must also be stressed that the reasons for unsanitary conditions are part of a vicious circle. Filth leads to a high rate of infection from disease and parasites, this leads to diminishing energy and greater poverty, and these in turn cause more unsanitary conditions.

But improving sanitation will probably be rather easy compared to the problem of changing Okinawan attitudes toward disease. In talking with Okinawans, it was in comparing Okinawan and American treatment of disease

753 177 [562] that I found the greatest resistance to any suggestion that American methods might have equal or greater validity. American material culture the Okinawans are delighted to accept, and they are eager for more. American social relationships they look somewhat askance at but they are willing to experiment, in a small way, with equal rights for women. But the suggestion that medically they don't know what ails them is harder to take. They are willing to accept modern medical explanations of disease as a partial explanation, perhaps as the occasional means by which the ultimate causes affect disease. The ultimate causes are supernatural.

753 177 769 182 To challenge the concept ugwambusuku, the insufficiency of worship that causes illness, is to challenge the present structure of religion, and at a point where it is most closely bound to social organization. Anxiety over insufficiency of worship and its possible consequences is probably the strongest force motivating the whole range of activities connected with death, burial, and the worship of ancestors. It is not too far-fetched to suggest that it is also a reason for respecting one's elders during their lifetime. It is no wonder that Okinawans show a strong resistance to any challenge to these beliefs, even though they may not be conscious of all the implications of the challenge.

753 177 757 To challenge the whole structure of belief would probably be wholly unsuccessful. Or if somehow the Okinawans could be persuaded to abandon these beliefs at once, the result would probably be either chaos or the uncritical acceptance of another set of beliefs that might soon prove to be just as far out of line with medical science as the present. Probably the surest way to introduce modern medical concepts is by gradually whittling down the native concepts beginning with the more peripheral ones. This is not as hopeless as it might seem, for some changes have already taken place. [846] Until recently women after childbirth were baked for about a week over a fire in the jiiru, a hearth in the back room of the house, even in hot weather. It is said that it was a very uncomfortable experience and that in warm weather it often resulted in rashes and boils, yet it was practiced because it was thought to be necessary for the health of the woman. In the last few years this practice has been abandoned. One woman informant was positive that the hideous skin condition called heegasa or "scruff" could be prevented by drawing out the "bad blood", but she was equally positive that the former practice of baking a new mother was useless if not harmful. Some day she may become convinced that cutting an infant's buttocks with a razor is useless if not harmful. She will be convinced when someone has demonstrated to her that heegasa can be prevented by another means and that because the blood circulates it is no more"bad" at one place than another. The concept "bad blood" is a peripheral one, with no close relationship to religion or social organization.

Other peripheral beliefs are those associated with the yabuu, the efficacy of moxa and the golden needle of acupuncture. In demonstrating the superiority of modern medicine over these techniques one may not always count on the cooperation of educated Okinawans. In opposing the practice of [181] the yabuu and other practitioners one runs counter to one of the strongest themes of Okinawan culture---one must not interfere with another's livelihood.

52 178 621 The general characteristics of the changed entertainment patterns have been a greater reliance on entertainment provided by sources outside the village---the school, radio, movies---and a sharp decline in celebrations and festivals of the sort which emphasized village participation and unity.

757 753 177 Health and Medicine Changes in medical practice well illustrate the principle that material things find more ready acceptance than ideas in the diffusion of culture; in short, Okinawans have been willing to adopt modern medicine when available, but not modern medical principles. Pills, shots, surgery, dentistry, penicillin, and DDT have found acceptance, while modern scientific concepts of disease, health, and sanitation seem to have made relatively little headway. The germ theory, for example, has barely penetrated.

753 751 177 However, on talking to people of different ages one becomes aware that many changes in standards of sanitation and ideas about health and disease actually have taken place in the last fifty years. For example, evidence of the practice of tattooing various parts of the body as a cure for certain ills is rarely seen on persons under seventy. Similarly, though many of the younger generation may appear abysmally ignorant of modern knowledge of disease, they are always less ignorant and better informed than the preceding generation. Considerable progress toward better sanitation was made under the [364] Japanese. Formerly the Okinawan privy was built atop the pigpen, and the pig [231] subsisted in part on human feces. Stern measures were required to force the abandonment of this practice. The Japanese also introduced monthly sanitation inspections; inoculations for babies and school children were made compulsory. [515] Through the influence of the schools the toothbrush (usually one) became a part of every home. The Japanese also sent notable scholars into the country-[582] side to lecture the people on the dangers of in-breeding practices, particularly kin-group endogamy.

757 177 Penicillin, which was introduced by the Americans, has become a popular treatment, achieving equality with moxacautery and cutting to let blood. It can be obtained easily at any drug shop, and every doctor, midwife, herbalist, and practitioner of any sort is prepared to administer shots. Reliance excessive even by American standards is placed on this drug. There seems, in fact, to be a fondness for shots which does not end with penicillin; hormone shots and various other injections are widely advertised. It is the opinion of the author that any type of modern medicine which cuts, punctures, or otherwise disfigures the skin will find ready acceptance; this, it is felt, is merely an extension of the tradition of acupuncture, moxacautery, tattooing, and cutting. Bettelheim states that in the 1850's the Okinawans made inquiries as to how inoculations for smallpox might be obtained.[1]

759 178 There is some indication that the yabu, a practitioner whose chief stocks-in-trade are herbs and moxacautery, is slowly disappearing; in several communities the author was told that since the old yabu died there had been no replacement.

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[1] Bettelheim, B. J., Loochoo Mission, London, n.d., pp. 34-36.